

IN THE CLAIMS:

The status of each claim that has been introduced in the above-referenced application is identified in the ensuing listing of the claims. This listing of the claims replaces all previously submitted claims listings.

1. (Original) A method for insulating at least one aperture formed through a substrate, comprising:
introducing a quantity of unconsolidated dielectric material into the at least one aperture; and
selectively consolidating unconsolidated dielectric material located adjacent to a periphery of the
at least one aperture to form an insulative coating on surfaces of the at least one aperture.
2. (Previously Presented) The method of claim 1, wherein introducing comprises
introducing a quantity of unconsolidated UV-curable dielectric material into the at least one
aperture.
3. (Previously Presented) The method of claim 2, wherein selectively consolidating
comprises exposing portions of the unconsolidated UV-curable dielectric material to UV
radiation in the form of a laser beam.
4. (Previously Presented) The method of claim 1, wherein introducing comprises
dispensing the quantity of unconsolidated dielectric material into the at least one aperture.
5. (Previously Presented) The method of claim 1, wherein introducing comprises
lowering a level of the substrate relative to a level of a volume of the unconsolidated dielectric
material.
6. (Previously Presented) The method of claim 1, wherein selectively consolidating
comprises directing an energy beam onto selected regions of the quantity of unconsolidated
dielectric material.

7. (Previously Presented) The method of claim 1, further comprising:
repeating introducing and selectively consolidating at least once to form another layer of the
insulative coating.
8. (Original) The method of claim 1, further comprising:
removing unconsolidated dielectric material remaining within the at least one aperture.
9. (Previously Presented) The method of claim 8, wherein, upon removing, a via
hole that extends through the insulative coating is exposed.
10. (Previously Presented) A method for forming electrically conductive vias through
a substrate, comprising:
forming at least one precursor hole through the substrate;
introducing unconsolidated dielectric material into the at least one precursor hole; and
selectively consolidating portions of the unconsolidated dielectric material at locations adjacent
to a periphery of the at least one precursor hole to form a layer of an insulative coating on
surfaces of the at least one precursor hole.
11. (Previously Presented) The method of claim 10, wherein forming comprises
forming the at least one precursor hole to have one of a substantially cylindrical shape, a
substantially frustoconical shape, an hourglass shape, and a bulging center.
12. (Previously Presented) The method of claim 10, wherein forming includes
drilling through the substrate.
13. (Previously Presented) The method of claim 12, wherein forming further includes
trepanning the substrate.

14. (Previously Presented) The method of claim 10, wherein introducing comprises introducing an unconsolidated UV-curable dielectric material into the at least one precursor hole.

15. (Previously Presented) The method of claim 14, wherein selectively consolidating comprises exposing portions of the UV-curable dielectric material to UV radiation in the form of a laser beam.

16. (Previously Presented) The method of claim 10, wherein introducing comprises dispensing the unconsolidated dielectric material into the at least one precursor hole.

17. (Previously Presented) The method of claim 10, wherein introducing comprises lowering a level of the substrate relative to a level of a volume of unconsolidated dielectric material.

18. (Previously Presented) The method of claim 10, wherein selectively consolidating comprises directing an energy beam onto the portions of the unconsolidated dielectric material.

19. (Previously Presented) The method of claim 10, further comprising:
repeating introducing and selectively consolidating at least once to form another layer of the insulative coating.

20. (Previously Presented) The method of claim 10, further comprising:
removing unconsolidated dielectric material remaining within the at least one precursor hole.

21. (Previously Presented) The method of claim 20, wherein, upon removing, a via hole that extends through the insulative coating is exposed.

22. (Previously Presented) The method of claim 21, further comprising:
introducing conductive material into the via hole.

23. (Previously Presented) The method of claim 22, wherein introducing conductive material comprises introducing at least one of polysilicon, a metal, a metal alloy, a conductive elastomer, and a conductor-filled elastomer into the via hole.

24. (Previously Presented) The method of claim 22 wherein introducing conductive material comprises at least one of physical vapor depositing, chemical vapor depositing, electrolytic plating, electroless plating, and immersion plating.

25. (Previously Presented) The method of claim 22, wherein introducing conductive material comprises dispensing the conductive material.

26-47 (Canceled)